

IN THE CLAIMS:

1. (Currently Amended): A thermostat failure diagnosis method comprising the steps of:
measuring an intake air quantity and a cooling water temperature;
determining a standard time period ~~in response to an~~ based on the intake air quantity
and ~~[[a]] the~~ the cooling water temperature;
counting down until the standard time period reaches zero;
detecting a cooling water temperature and storing same when the standard time
period reaches zero;
correcting a target temperature accounting for the influence of a head wind; and
comparing the stored cooling water temperature with the corrected target temperature
to determine whether or not a thermostat has failed.
2. (Original): The method as defined in claim 1 further comprising a step of determining
whether a thermostat failure diagnosis condition is met and carrying out the thermostat failure
diagnosis only if the condition is met, wherein the thermostat failure diagnosis condition is
previously defined using a cooling water temperature during the start of the engine, an intake
air temperature during the start of the engine, and the intake air quantity as factors.
3. (Currently Amended): The method as defined in claim 1,
wherein the standard time period comprises at least one predetermined amount of
time;
and wherein the countdown of the standard time period is performed by one step for
~~every~~ each of said at least one predetermined amount of time.
4. (Currently Amended): The method as defined in ~~claim 1~~ claim 2, wherein:
the step of determining the standard time period further comprises the step of
determining the standard time period ~~in response to~~ based on the intake air quantity and
cooling water temperature if the thermostat failure diagnosis condition is met; and
the step of counting down further comprises the step of re-adjusting the standard time
period in response to the changed intake air quantity and the cooling water temperature
thereof when the intake air quantity is changed during the countdown.

5. (Original): The method as defined in claim 4, wherein the standard time period re-adjusting step further comprises a step of comparing the standard time period remaining after countdown, just before the intake air quantity is changed, with a standard time period determined in response to the changed intake air quantity and cooling water temperature thereof to determine a larger time as a new standard time period and to continue the counting down step using the new standard time period..

6. (Original): The method as defined in claim 1, wherein the correcting step further comprises the steps of:

- calculating an average vehicle speed;
- determining a correction constant in response to intake air temperature and the average vehicle speed; and
- multiplying the correction constant by the target temperature to determine the corrected target temperature.

7. (Original): The method as defined in claim 6, wherein the correction constant is stored in a map table such that the correction constant is based on the intake air temperature and the average vehicle speed.

8. (Original): The method as defined in claim 1, wherein the thermostat failure diagnosing step further comprises a step of determining that the thermostat has failed if the stored cooling water temperature is less than the corrected target temperature, and determining that the thermostat is functioning properly if the stored cooling water temperature is above the corrected target temperature.